

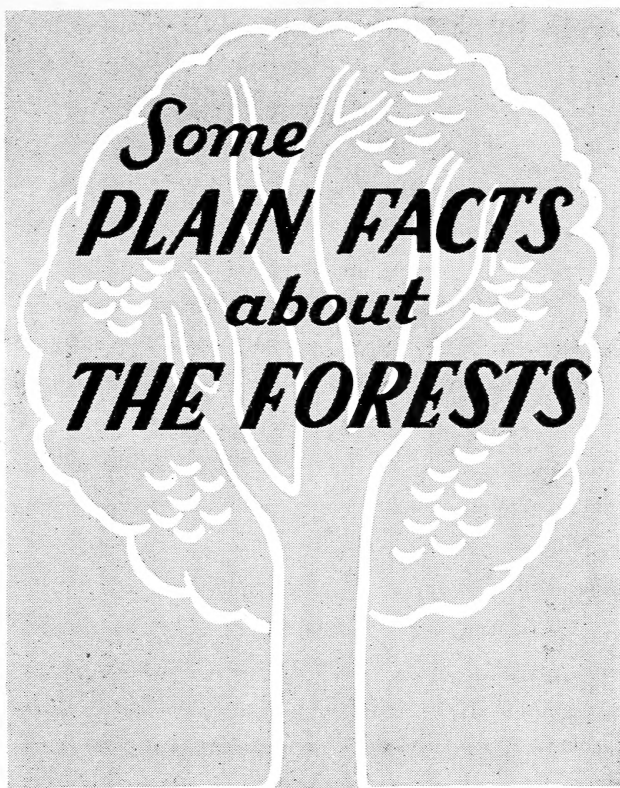
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Some
PLAIN FACTS
about
THE FORESTS

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

Miscellaneous Publication No. 543

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This Nation's forests are not being grown as fast as they are being depleted. We have been using up our growing stock of timber and failing to make adequate provision for new growth. The growing stock is now less than what a prosperous, progressing Nation is likely to need.

Although the present forest situation is serious, it is by no means hopeless. Forests are a renewable resource; with proper management and protection they can be made to produce continuing crops. But if we are to be assured of abundant and permanent timber supplies, positive action will have to be taken on a Nation-wide scale to raise annual timber growth to an adequate level.

Washington, D. C.

Issued April 1944

Revised May 1949

SOME PLAIN FACTS ABOUT THE FORESTS

If we heard that some great scourge was threatening to destroy the productive capacity of millions of acres of our land, we would be greatly alarmed. Yet something very much like that is actually happening. The destructive agent in this case is our own carelessness and neglect, and it is jeopardizing the productive capacity of many of the Nation's forests. Because of our failure to adopt adequate conservation measures, our forests are not being grown as fast as we are depleting them. They are growing much less timber than we are likely to need in the future.

If we fail to gain some understanding of the importance of forests to national welfare and the necessity for keeping them permanently and adequately productive, an important element in knowledge essential to good citizenship will be lacking.

Much information on forest resources and their utilization is available. Unfortunately some of this contains statements which result in confusion or misunderstanding in the mind of the public as to the actual forest situation. Some statements even tend to promote the idea that there is nothing to worry about; to spread the idea that forest destruction and deterioration are negligible problems, and that good forestry is now so generally and widely practiced that the Nation is sure to have ample future timber supplies. Such statements are definitely misleading.

The advances made in forest conservation both by public agencies and by progressive industrial and private operators are praiseworthy steps in the right direction. However, we must realistically face the facts of continuing and unnecessary forest deterioration. Glossing over the unpleasant facts of the situation will not help in achieving the necessary corrective action.

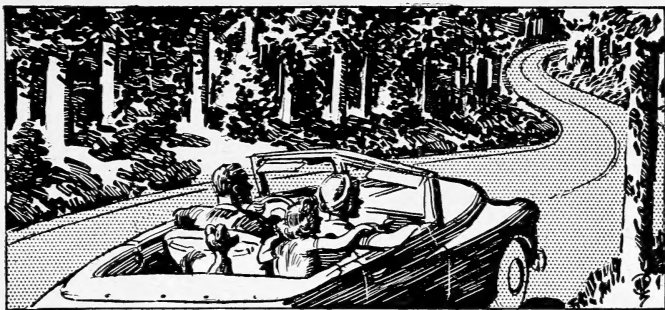
The following answers to 17 pertinent questions about the forests will, it is hoped, help to improve the general understanding of the forest situation. The information is based on a national survey and study of the timber resource as to quantity, quality, distribution, growth, drain, uses, requirements for timber, and status of forest management and protection. This reappraisal of the forest situation, the most complete and accurate so far made, was recently completed by the Forest Service, United States Department of Agriculture.

PLENTY OF TIMBER?

1. We have plenty of forest-land. Why not plenty of timber?

The fact that one-third of the area of the United States is forest land has been said to indicate that there will always be an abundance of timber. But it does not follow that all forest land is productive timberland.

Of some 624 million acres of forest land in the United States, approximately 163 million acres is noncommercial. This includes alpine, semidesert, chaparral or other forest-land types not suited for growing timber of commercial quality or quantity, and some better forest land set aside for parks and game preserves. Much of the noncommercial forest land is valuable for watershed protection, grazing, wildlife, or other purposes. Of the 461 million acres of commercial forest land, some 75 million acres is virtually nonproductive as a result of destructive cutting and fire. Of the remaining area all but about 44 million acres has been



cut over, and a large part of this cut-over land is now growing timber at only a fraction of its potential capacity.

The amount of usable wood that can be supplied annually does not depend solely on the acreage and character of the land. It depends fully as much on the volume and character of the growing stock, i. e., the forest capital of growing trees upon which annual growth of wood accrues as interest. We cannot continue indefinitely to allow this forest capital to melt away. If we are to keep on producing sawlogs, piling, pulpwood, etc., not only must adequate new growth be assured on areas cut over, but thrifty young trees up to and including the sizes of good-quality saw timber must be kept as growing stock.

Our growing stock, or forest "capital," must be built up and maintained if it is to yield an adequate amount of regular "interest" in the form of usable products. The decline in productive growing stock is most notable in the East and South, where many thrifty young stands are being cut indiscriminately. In the eastern half of the country, which contains three-fourths of the Nation's commercial forest area, forest growing stocks are generally below the level needed to sustain the current rate of saw-timber cutting. The same is true in parts of the West. War and postwar demands for forest products have accelerated the destruction of rapidly growing young timber in many places.



2. How does our present supply of timber compare with that of the past?

It has been said that almost as much usable timber is still standing in the United States as has been cut for lumber since the birth of the Nation. Such a statement is misleading. The significant fact is the uninterrupted trend of forest depletion which has impaired the base for permanent forest industries in community after community.

The amount of wood removed from American forests for lumber is only a fraction of the total taken. Even greater amounts have been removed for nonlumber products such as fuel wood, pulpwood, posts, poles, piling, hewn cross ties, mine props, and building logs. In addition, enormous quantities of timber in earlier years were simply felled and burned in clearing land for cultivation, or were and are still being destroyed by fire and storms, and by tree diseases and insects.

Another important consideration is that the quality of the second-growth timber is generally much inferior to that of the old growth. Most of the available high-quality old-growth timber is confined to relatively small parts of the Pacific Coast States, and can be supplied to consuming centers elsewhere only by long-haul, high-cost transportation. Furthermore, much of the remaining old-growth timber is in remote, rugged mountain areas where it can be harvested only at a very high cost.

TIMBER GROWTH AND TIMBER DRAIN

3. How does current forest growth compare with forest drain?

The rate at which new growth of wood takes place in our forests was estimated in 1945 at 13.4 billion cubic feet a year. The total drain on the forests in 1944—that is, timber cut, plus that destroyed by fire, insects, disease, etc.—amounted to 13.7 billion cubic feet. The fact that new timber growth almost equaled drain may seem to indicate that everything is coming along nicely.

Those estimates cover all timber—low-value kinds as well as good trees; small as well as big. More to the point would be a comparison of growth and drain in saw timber—trees of the kinds and sizes that could be used for lumber. Many other forest industries besides lumber—most of them, in fact—depend on saw timber. In trees of saw-timber size, drain in 1944 was at the rate of 53.9 billion board feet, while annual growth was only 35.3 billion board feet. *Saw-timber drain thus exceeded growth by more than 50 percent.*

It is probable that the excess of saw-timber drain over growth is even greater today. Annual growth probably has changed little. But the output of lumber in 1947 was substantially greater than in 1944, and lumber is the biggest item of drain.

It should be remembered also that much of the current drain is of high-quality old-growth timber, and especially the more valuable softwoods, whereas much of the new growth is of low-value hardwoods and other material of greatly inferior quality.

Overmature old-growth stands, in which little or no net growth occurs, may be converted, if properly cut, to young, vigorously growing stands. The important thing is to see that good new growth follows the cutting of the old growth.

We should plan on more than merely balancing timber growth and drain. A balance at present levels of use would mean no provision for the increasing needs of a growing population and expanding economy. Rather than figure on

how little we can get along with, we should plan for a liberal use of timber in an economy of full employment and abundance.

To meet the reasonably expected future needs, with a safe margin for security and a very moderate allowance for exports, the Forest Service estimates that we should strive to build up the growth rate of our forests to something like 20 billion cubic feet a year. Of this some 65 to 72 billion board feet should be saw timber. To achieve production at this level we shall have to increase the annual growth of all timber to 50 percent above present levels, and we shall have to double the annual growth of saw timber.

4. Would forest growth equal forest drain if fires were stopped?

Adequate protection from fire, insects, and disease would save a very great volume of timber. But 90 percent of the total drain is commodity drain—cutting timber for use. So even if the $4\frac{1}{2}$ billion board feet per year loss from all these so-called natural causes were entirely eliminated (which is of course not really possible) saw-timber drain would still exceed growth by a substantial margin. Also the benefits of better protection may be largely offset by premature cutting of young growth.

Although extremely important, fire control and protective work against insects and diseases are by no means the sole or the main answer to the forest problem. Much more than that is needed if forest growth is to be stepped up enough to meet our future requirements.

5. Why worry when only a small percentage of our timber is cut annually?

It has been said that because ordinarily only about 2 percent of our present stand of saw timber is cut for lumber in any one year, there is no need to worry; it should last another 50 years, even if no new timber were grown.

Actually, the drain is substantially more than that. The cut for lumber is only about 60 percent of the total drain on the saw timber of our forests. In 1944 the total cut for all purposes including pulpwood, fuel wood, and many other products, was about 3 percent of our present total saw-timber stand; and losses from fire, storms, insects, and disease add to the drain.

But whatever the percentage of drain might be, the important point is that cutting into forest capital without adequate replacement is traveling a downhill path. We should remember that a large volume of timber must be kept as growing stock if we are to maintain an adequate and uninterrupted output of commercial products. More than two-thirds of the remaining saw timber is concentrated in the West. The available timber in the East is not sufficient to sustain the present rate of cutting. And several decades are required to grow trees suitable for saw timber.

The drain on timber is serious enough for the Nation as a whole; for some communities it has been a terrible blow. Each year we hear of a number of sawmills closed down and dismantled because they are no longer able to get a satisfactory supply of logs. In a community primarily dependent on its sawmills, what satisfaction can it be to the people affected by a permanent shut-down to know that nationally the cut is only 2 or 3 percent of the stand?

This does not mean that we should stop the cutting of either old-growth timber or second growth. It does mean, however, that we can and should meet current needs with cutting practices and other measures that will assure adequate new growth.

With reasonably good management, our forest land should be ample to produce eventually all of the wood we are likely to need, and keep on producing it continuously. There is no need for permanently curtailing our consumption of wood, provided we take the necessary steps to produce it in abundance.

6. What shortages in forest products are there today, and why?

During the war, wood was a critical material, with production falling below military and civilian demands. We had particular difficulty finding enough high-quality standing timber for some of the needed specialty items such as Sitka spruce for airplane lumber, walnut for gunstocks, and high-quality oak for building small ships.

After the war, we had difficulty meeting the needs for good-quality lumber for housing construction. We are depending on other countries, primarily Canada, for more than 80 percent of our newsprint.

Structural timbers of most species and long, wide boards free from knots or other defects are increasingly difficult to obtain in the needed quantities. Most of our high-quality and specialty-type lumber comes from old-growth forests, which are obviously not as available today as previously. Chances for opening up new logging operations in unworked timber are becoming scarcer; and those that remain are mostly in remote areas that can be logged only at high cost.

Current levels of domestic consumption are being maintained only by drawing heavily on the remaining stands of virgin timber in the West and by continuing to deplete saw-timber growing stock in the East.

If supply balances demand in the next few years, it may be largely because prices and other economic factors are such that people cannot afford to use the timber products they otherwise would. In other words, we would be meeting the active demand—at very high prices—but not the real need.

7. Can we increase our supply of wood by reducing waste?

Yes, we can. Forest reappraisal studies indicated that of all the wood cut in logging in the United States, only 43 percent winds up in useful products other than fuel.



Twenty-two percent is used as fuel. Thirty-five percent is not used at all.

This waste includes tops and limbs of trees, cull logs and other material left in the woods after cutting; sawdust, slabs, and edgings at the sawmills; material lost in pulping liquors, and other wastage in the manufacture of wood products.

Whatever we can do to reduce this enormous wastage will help us get more useful things from trees without increasing the drain on the forests. Both Government and industry are working on the problem—trying to find new techniques for harvesting wood and processing it with less waste, and economical ways of using material now wasted.

But waste reduction will not of itself solve the problem of timber supply. Many needed forest products, such as good-quality lumber, veneer, poles, and piling, cannot be made from low-grade or small-size waste. We shall have to grow the timber for these products. In fact, timber has to be grown even before it can be wasted!

8. If wood gets too scarce, won't there be other materials to take its place?

Growing scarcity of timber may force some use of substitute materials. And new products undoubtedly will come along to displace wood in some of its present uses. That has been happening for centuries. Yet as old traditional uses of wood faded out of the picture, new uses developed. Demand for wood pulp and paper products, for instance, has increased tremendously in recent years.

For some uses—railroad ties, for example—no satisfactory substitute for wood has yet been found. Wood is so versatile a material and has so long been the choice material for so many things that there can be little question of its holding its place in competition with other materials, so long as it can be supplied in adequate quantities, at reasonable cost.

Recent technological advances in wood utilization, indeed, point to an increasing demand. The Forest Products Laboratory at Madison, Wis., has accomplished some striking results in increasing the value and usefulness of forest products. Laminated wood, improved plywoods, and wood and paper-base plastics are finding an increasing variety of uses. Such products as “impreg,” “compreg,” “staypak,” and the “uralloys” are receiving growing recognition in the industrial field. It is now possible to produce industrial alcohol, or high-protein livestock and poultry feed, from wood. The possibilities for chemical conversion of wood are practically unlimited.

Many of the materials that might be used in place of wood are definitely exhaustible. Supplies of some of the metals may last a long time, but when the mines are worked out the supply stops. Known reserves of some minerals are already low. But forests are a renewable resource. Wood can be grown as a crop. And we have a vast acreage capable of and available for growing it, most of which land would be of little value for other purposes.

We shall certainly be short-sighted if we fail to manage that land for the continuous production of such a useful and needed raw material as wood.

TREE PLANTING?

9. Will tree planting solve the problem?

We hear of millions of trees being planted in reforestation projects. Some conservation enthusiasts demand that two trees be planted for every one cut.



Even though Federal and State Governments and other agencies maintain nurseries capable of producing hundreds of millions of trees each year, the combined planting by all agencies, public and private, is covering only a small fraction of the area needing reforestation.

When an area is planted it usually means setting out about 800 to 1,000 trees to the acre. A million trees will thus cover only 1,000 to 1,250 acres.

From 1926 to 1946, the United States Forest Service planted 1,592,007 acres in the national forests. Other Federal agencies planted 201,286 acres. State agencies planted 949,798 acres; counties, towns, and cities 253,085 acres; farmers and other small owners 1,691,931 acres; railroads, pulp and paper, lumber, water and other companies 397,150 acres; and schools and colleges 23,935 acres. Planting by all agencies in the 20-year period totaled 6,483,632 acres, and on 4,243,788 of these acres the planting is classed as successful.

This is a laudable and encouraging beginning. But at this rate reforestation of all the millions of acres of denuded and poorly stocked forest land in need of planting would require generations.

Much of our artificial reforestation is a rehabilitation measure to correct past mistakes. Some 75 million acres of forest lands in the United States are now poorly stocked or

denuded. Some of this area may eventually restock naturally, but much of it will need to be replanted if it is to be restored to productivity in any reasonable time. A planting goal of 32 million acres in 25 years, which would require more than a billion trees a year, has been suggested for a reasonably adequate attack on this huge reforestation job.

But even when an area is planted we have to wait 50 to 100 years or more before the seedlings grow into good-quality saw timber. So it is far more important to see to it that the kind of neglect and misuse which has made such reforestation necessary is not continued. With good management, most of our existing forest stands can be made to continue yielding merchantable timber at frequent intervals without the necessity of artificial reforestation.

10. What about "Tree Farms"?

The forest products industries of Washington and Oregon a few years ago launched a splendid movement for the establishment of "tree farms"—private timberland holdings whose owners agree to manage their forests on a continuing-crop basis. The tree-farm idea is being promoted in other States, and some 17 million acres have been signed up.

Although the movement is gaining ground, the number of owners adequately carrying out the tree-farm plan is still relatively small. It is probably too much to expect that all of the millions of forest-land owners will quickly be induced to adopt the plan, or that all those who do will stick with it permanently. The plan carries no guarantee of permanence.

Nevertheless, the plan is highly commendable; to the extent that the principles of tree farming are fully carried out by operators subscribing to the plan, the productivity of their lands will be maintained at a high level.

FOREST OWNERSHIP

11. Who owns our forests?

Of the Nation's 624 million acres of forest land, 196 million acres are in public ownership—community, State, and Federal—and 428 million acres are in private ownership. Of the commercial forest land—land capable of growing commercial timber crops and available for this purpose—approximately 116 million acres are in public ownership and 345 million acres in private ownership.

A major portion of the publicly owned forest land is in national forests administered by the United States Forest Service. On these lands scientific forestry is applied and as fast as they can be opened up the timber stands are being managed for what foresters call sustained yield—that is, continuous production at a high level. Similar management is being applied to many of the forest lands in other Federal and State ownerships.

Publicly owned forest land, however, includes only about one-fourth of the total commercial forest acreage. Generally the most accessible, easily logged, and most productive forest lands are in private ownership.

About 40 percent of private forest lands is in farm ownership; another 35 percent is in small nonfarm holdings; and 25 percent is in industrial or other large holdings (5,000 acres or more).

The 139 million acres in farm woodlands is divided among $3\frac{1}{4}$ million farmers. Another 125 million acres is held by a million nonfarm owners—investors, small-business men, owners of estates, and others. Many of these are absentee owners; with them the problem of encouraging good forestry practice is especially difficult.

Private forest lands, large and small, include at least 80 percent of the potential timber-growing capacity of the entire country. They furnish about 90 percent of our present output of all forest products.

It is evident, therefore, that *the Nation is primarily de-*

pendent upon private lands for its timber supplies. The public has a vital interest in the proper management of these lands not only because we must look to them for the bulk of our timber supplies but also because they include nearly two-thirds of the forest area where watershed protection problems are most critical, and because they are important to national welfare in many other ways.

12. How are our private forest lands being handled?

In every region a growing number of forest owners are putting good forest practice into effect. They protect and harvest their timber with an eye to future crops, thus demonstrating that such methods are practicable. But all told, only 8 percent of the cutting on private lands can be classed as good or better according to a survey made in 1945. Twenty-eight percent rates fair; 64 percent of all cutting on private land is still poor to destructive.

This is due partly to lack of knowledge, partly to economic pressures, and partly to indifference; but regardless of the cause, the country cannot afford to allow poor or destructive forest practices to continue. The public values are too great.

Timber Cutting on Private Lands

(From the standpoint of keeping the forests adequately productive)

Ownership class	Character of cutting				
	High order	Good	Fair	Poor	Destructive
	Percent	Percent	Percent	Percent	Percent
Small.....	0	4	25	63	8
Medium.....	1	7	31	50	11
Large.....	5	24	39	28	4
All owners.....	1	7	28	56	8

WHAT FORESTS MEAN

13. What interest has labor in forests?

More than a million workers and their families obtain their living directly from the forests—in work in the woods, in lumber and paper mills, and in wood-using industries. The forests contribute indirectly to the support of many millions more—for example, in the railroad and other transportation industries, in the construction industries, in water and power utilities, in retailing, in sporting goods manufacture, and in businesses serving tourists and recreation. Forest pay rolls help to support many other industries and services.

Steady jobs in forest-supported industries can of course come only from steadily producing forests. The history of lumbering in the United States has been largely a matter of resource liquidation—taking out the timber and moving to another region. To a large extent the forest worker has been forced to migrate from job to job, with little opportunity to settle down and have a real home.

It is to the interest of labor that our forests be managed for continuous production. Producing forests mean jobs, steady income, better opportunity for home and community life. Forest deterioration and destruction mean unemployment, disrupted home life, and communities on the down grade.



Forest restoration in itself requires a vast amount of work. Work is needed to restore depleted forest areas to productivity and to improve and expand the facilities for forest protection and management. Measures to improve timber growth, development of forest research and administrative facilities, and new forest recreation facilities are desirable. Work along these lines, aside from furnishing more security for present forest industries and their dependent workers, would ultimately develop the possibilities for hundreds of thousands of permanent new jobs based upon an increasingly productive natural resource.

14. What interest has the farmer in the forests?

Nearly one-third of all our commercial forest land is in farm ownership. More than 3 million farmers own woodland acreage. Many farmers derive substantial income from the sale of woodland products. Cutting, skidding, and hauling wood products affords opportunity for profitable employment during periods when other farm work is slack. In addition, farm woodlands yield fuel, posts, and other products for home use. On many farms, however, the woodlands have been so mistreated that no income can be expected for many years.

With proper management, farm woodlands can play an important part in successful farming, yielding steady returns over the years. And farm woodlands can play an important part in the national welfare as one of the major sources of forest production. The average farmer, however, is not an expert lumberman or forester. He is often at a disadvantage in dealing with timber buyers, accepting lump-sum payments far below actual value, and allowing his woods to be either "high-graded" or clear-cut. It is to the interest of farm woodland owners that expert forestry guidance be available and that good forest management be the general practice.

Whether his farm includes forest land or not, the farmer has a stake in the forests. He must have lumber for farm

buildings, fuel wood, posts, poles, and other forest products for various farm operations. Much of his produce is shipped in wooden, or paper (made from wood) containers. The conditions of the forests on the hills may affect his water supply. Irrigation—the lifeblood of agriculture in the West—is largely dependent upon forest-protected watersheds.

15. What interest has the average citizen in forests?

Whether he lives in the backwoods or in a crowded city, regardless of occupation or activity, every citizen is concerned with the welfare of the forests. He may be inclined to take most things for granted—his newspaper, his easy chair, the water that flows from his kitchen faucet—without stopping to think that they come from the forest. Forests provide the raw materials for countless products essential to modern living. Most American homes are built of wood; all have some wood in their construction. Furniture, books, magazines, radio cabinets, baseball bats, rolling pins, turpentine for paints, and rosin for soaps are products of the forests. Plastics, rayon, sausage casings, and photographic film are some of the newer products made from wood. Forest products pay the third largest freight bill, and the railroad lines are laid on wooden ties. More than 10,000 products of wood have been listed, and wood enters in some degree into the manufacture, processing, or delivery of practically all other products. During the war, the Army said, wood was required for some 1,200 different items of military equipment. Modern technology is constantly developing new uses for wood, and *the prospects are that our needs for timber will increase in the future.*

Well-managed forests on the watersheds can conserve water supplies, help to reduce floods, and regulate stream flow. Forests are the home of much of our wildlife; they provide scenic beauty and afford recreational opportunities for millions.

Forests are the principal economic support of hundreds of communities. When the trees are gone, the mills shut down, pay rolls stop, homes are lost, and towns decay. In the past some of the worst areas of unemployment, tax delinquency, and business shut-downs have been areas where all the timber was cut out.

FOR THE FUTURE

16. Can our forests be made to supply all our timber requirements?

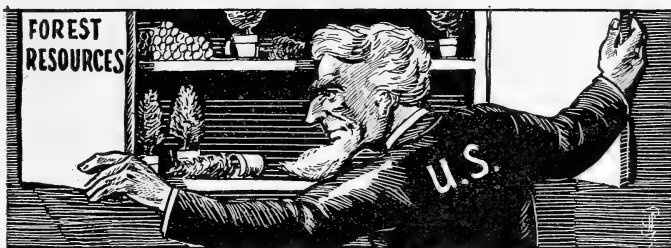
In the long view, the potential timber-producing capacity of the forest land in the United States is sufficient to supply all our prospective needs for timber, with a margin for export and for security.

One-sixth of our commercial forest land, however, is now virtually nonproductive. Other millions of acres are producing only a fraction of potential capacity. *America's forest lands can assure ample and continuous forest products only if sound forest practices are applied. This means that a very material improvement over the general level of present practices must be achieved.*

17. How can all forest lands, regardless of ownership, be kept productive?

The most urgent need is to stop destructive cutting. The public has the right and duty to insist that our forest land, regardless of ownership, be kept in productive condition. Public regulation to prevent destruction by forest fire has long been in effect. Public control to prevent destruction by improper cutting and other destructive practices on private land is equally essential. Action along this line has been recommended by the Department of Agriculture.

Under such recommendations, adequate regulation of timber cutting and related practices would be accomplished



by a Federal-State plan. Such a plan would assure Nation-wide application of basic standards established by Federal law but would give opportunity, and Federal financial assistance, for the individual States to carry out under State laws regulatory programs with rules of practice adapted to local conditions. There would be provision for Federal administration in States which requested it or which after a reasonable period, failed to put such regulation into effect. The basic standards of forest practice would prohibit stripping land of every usable tree (except under special circumstances); prohibit premature or wasteful cutting in young stands; provide for certain safeguards against fire, insects, and disease; and provide for keeping a sufficient growing stock of desirable trees so that the lands can continue to produce a reasonable amount of timber.

These are not drastic or extreme standards or controls. Indeed many progressive private owners, as well as public owners, have already put higher standards into effect. So public regulation would not, of itself, bring about the most desirable type of forest management. But it would prevent further destructive exploitation of our forest resources.

As another part of a national program of forest conservation, the Forest Service and other conservation agencies have recommended expansion of public aid to private owners in fire protection and insect and disease control, in woods-management and wood-utilization problems, and other cooperative aids.

Public cooperation should encourage private enterprise in forestry in every legitimate way, helping it to provide the production, employment, and security upon which the welfare of the people depend. Public service in the field of scientific research already has pointed the way to improved techniques in forest management and to better ways of manufacturing and using forest products. It has made possible the saving of millions of dollars. The value of a continuing, thoroughgoing research program can hardly be overestimated.

Timber owners and operators, especially the smaller ones, need more technical assistance in forest-management and in wood-utilization problems. Government assistance might be provided in the establishment of cooperative associations of small forest-land owners. Better credit facilities would help to meet the needs for long-term loans for forest owners striving to build up depleted properties and practice permanent timber growing. Property taxation in some cases needs to be adjusted so as not to impose inequitable burdens on owners of growing timber. Government aid in fire protection, and in the control of destructive insects and tree diseases needs to be strengthened.

Such public cooperation would help private owners make the transition from destructive methods of cutting to con-



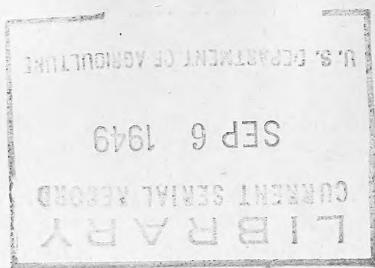
tinuous production, and encourage them to practice the best kind of forest management.

The amount that some forest lands can produce is so low and the rate of growth so slow that private owners will not ordinarily attempt to grow timber on them. Other lands lie in such rough or inaccessible country that they have little attraction for the owners after the original timber is cut; and still other lands have been so denuded as to offer no prospect of income for many decades. There are also certain areas where acute problems of watershed protection, or need for protection or development of recreational and scenic values, or other public interest outweighs the interests of a single owner. For many such lands, public purchase and administration is a logical answer.

A necessary corollary of public ownership, of course, is adequate provision for the protection, development, and utilization of the public forests.

Destructive timber cutting may have far-reaching effects. It may dry up a neighbor's water supply, or contribute to flood damage hundreds of miles away. It may undermine the welfare of whole communities. It may deprive us of material that may later be essential for national defense and security. (In World War II our armed forces used a greater tonnage of forest products than of steel.) *It is to the public interest therefore that our forest lands, regardless of ownership, be properly handled.*

Adequate measures to keep our remaining forests productive, and to restore the growing stock on our depleted forest lands, would open up new opportunities for business activity and develop new sources of national income. They would help to make the one-third of our country that is forest land supply a continuous abundance of products and services for the welfare of our citizens.



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